8100 Product Series
Firmware Release Notes

Remark

This document contains the firmware release notes for all products of the 8100 product series.

ATTENTION:

Once network cards are updated to a version equally or higher than v2000, it is no longer possible to downgrade to a version earlier than v2000.

Changes

Product	Changes	Current firmware version	Previous firmware version
FG8101G01		v0300	v0300
FG8101G02		v0300	v0300
FG8701G01	X	v2001	v2000
FG8701G02	X	v2001	v2000
FG8701G03	X	v2001	v2000
FG8702D01	X	v2001	v2000
FG8702G01	X	v2001	v2000
FG8702G02	X	v2001	v2000
FG8702G03	X	v2001	v2000
FG8702G04	X	v2001	v2000
FG8702G05	X	v2001	v2000
FG8702G06	X	v2001	v2000
FG8702G11	X	v2001	v2000
FG8702G12	X	v2001	v2000
FG8702G13	X	v2001	v2000
FG8702G14	X	v2001	v2000
FG8702G15	X	v2001	v2000
FG8800M00	X	v2001	v2000
FG8800M01	X	v2001	v2000
FG8801F02	X	v2001	v2000
FG8801N02	X	v2001	v2000
FG8802S00		v0401	v0401
FG8802S01		v0401	v0401

FG8802S02		v0401	v0401
FG8802S20		v0401	v0401
FG8803S02		v0401	v0401
FG8803S20		v0401	v0401
FG8901P01		v0202	v0202
FG8901P02		v0202	v0202
FG8901P03		v0202	v0202
FG8901P04		v0202	v0202
FG8901P06		v0202	v0202

FG8x01Gxx Firmware Release Notes

Firmware Version	Changes
v0300	Added: Support of FG8201G01 Added: Fan management feature Added: Action for fan testing Added: Different modes for timedomain representation on display Bugfix: Board monitoring and board status representation on display
v0200	Added: LED blinking action for system indication
v0109	Improvement: Fan speed evaluation has been improved
v0108	Improvement: Display representation while leap second event Improvement: Local time representation after a reboot
v0107	Improvement: Display shows “H” for holdover mode instead of “C” for crystal mode
v0106	Improvement: Changed display default configuration, to same behaviour as in v0104 Improvement: Support of different display behaviours (permanent on or timeout based)
v0105	Bugfix: Fixed issue with negative time zone offset on display
v0104	First released firmware version

FG8702D01 Firmware Release Notes

Firmware Version	Changes
v2001	Security: Resolving PHP issue (CVE-2026-109618, CVE-2026-109619) Security: Resolving OpenSSH issue (CVE-2026-59998, CVE-2026-59999, CVE-2026-60000, CVE-2026-60001) Bugfix: Fixed an issue where the user was logged out in ***huma*** after stopping a packet capture action Bugfix: Fixed an issue where the network statistics for eth1 were not updated
v2000	Added: Support for the year 2038 (Y2K38) issue Added: Support of FG8201G01 Added: Action for HTTPS certificate generation Added: Fan management feature Added: Action for fan testing Added: Different modes for timedomain representation on display Added: Upload of custom language file Added: CPU and memory usage as SNMP values Added: Showing which Activation Keys are used by each position Added: Configuration for persistent SNMPv3 engine ID Added: Action for downloading a list which shows blocked firewall packets Added: Password rules configuration Added: NTP client list feature (Status for max. 20 NTP clients and an action for downloading a list which shows all NTP clients) Added: Extended relay logic configuration functionality Added: Power management section with configurable custom PSU events Improvement: Responsive system and board layout across different browsers and zoom levels

	Improvement: Updated the default configuration for relay switching accuracy tresholds Improvement: Security hardening Bugfix: Adjusted the positions displayed in the toast notification indicating which positions need to be rebooted after a configuration change Bugfix: Step when offset >= 100ms functionality with NTP as sync source was not working correctly Bugfix: Fixed a false firewall warning when NTS (RFC8915) is enabled. Previously, the system incorrectly displayed a message stating that NTS was blocked by the firewall, even if a correct firewall rule was already in place. Bugfix: Added a missing warning if DNS is blocked by the firewall. Previously, the system showed no warning if DNS is configured, but there is no correct firewall rule in place. Bugfix: Fixed an issue that could cause the embedded to get stuck in the bootloader during startup.
v1301	No changes, only firmware version increased
v1300	Added: New update procedure for future firmware version v2001 Improvement: Threshold of antenna short circuit detection adapted Bugfix: Values of Max. accuracy clamping dropdown were not shown in extension cards Bugfix: EMAIL monitoring
v1204	Improvement: Update of FG8702D01 as extension board stabilized
v1203	No changes, only firmware version increased
v1202	Improvement: Firmware update stability
v1201	Bugfix: Incorrect display of HW timestamping error in active events
v1200	First released firmware version

FG870xGxx Firmware Release Notes

Firmware Version	Changes
v2001	Security: Resolving PHP issue (CVE-2026-109618, CVE-2026-109619) Security: Resolving OpenSSH issue (CVE-2026-59998, CVE-2026-59999, CVE-2026-60000, CVE-2026-60001) Bugfix: Fixed an issue where the user was logged out in ***huma*** after stopping a packet capture action Bugfix: Fixed an issue where the network statistics for eth1 were not updated
v2000	Added: Support for the year 2038 (Y2K38) issue Added: Support of FG8201G01 Added: Action for HTTPS certificate generation Added: Fan management feature Added: Action for fan testing Added: Different modes for timedomain representation on display Added: Upload of custom language file Added: CPU and memory usage as SNMP values Added: Showing which Activation Keys are used by each position Added: PTP Extended functionality “Use Padding TLVs” for PTP as sync source Added: Configuration for persistent SNMPv3 engine ID Added: Action for downloading a list which shows blocked firewall packets Added: Password rules configuration Added: NTP client list feature (Status for max. 20 NTP clients and an action for downloading a list which shows all NTP clients) Added: Extended relay logic configuration functionality Added: GNSS position accuracy status, GNSS reception quality status for all supported frequency bands and a GNSS skyplot Added: Power management section with configurable custom PSU events

	Improvement: Extended Galileo OSNMA feature to operate on **all board revisions** with high precision dual-band L1/L5/E5a GNSS receiver (FG8701G01, FG8702G11, FG8702G12, FG8702G13; affects only GNSS2 on FG8701G03, FG8702G04, FG8702G05, FG8702G06, FG8702G15) Improvement: Optimized PTP clock classes calculation Improvement: PTP synchronisation stability Improvement: Responsive system and board layout across different browsers and zoom levels Improvement: Security hardening Bugfix: Short holdover time during startup was fixed Bugfix: Adjusted the positions displayed in the toast notification indicating which positions need to be rebooted after a configuration change Bugfix: Removed non-required PTP TLVs from messages in specific PTP profiles Bugfix: Step when offset >= 100ms functionality with NTP as sync source was not working correctly Bugfix: Changed representation of PDOP (e.g. 123 -> 1.23) Bugfix: Fixed a false firewall warning when NTS (RFC8915) is enabled. Previously, the system incorrectly displayed a message stating that NTS was blocked by the firewall, even if a correct firewall rule was already in place. Bugfix: Added a missing warning if DNS is blocked by the firewall. Previously, the system showed no warning if DNS is configured, but there is no correct firewall rule in place. Bugfix: Fixed an issue that could cause the embedded to get stuck in the bootloader during startup.
v1301	Bugfix: TLV type of PTP Extended functionality “Use Padding TLV” changed to 0x8008
v1300	Added: New update procedure for future firmware version v2001 Added: Security feature Galileo OSNMA for Revision C boards with high precision dual-band L1/L5/E5a GNSS receiver (FG8701G01, FG8702G11, FG8702G12, FG8702G13; affects only GNSS2 on FG8701G03, FG8702G04, FG8702G05, FG8702G06, FG8702G15) Added: PTP Extended functionality “Use Padding TLVs” Bugfix: Values of Max. accuracy clamping dropdown were not shown in extension boards Bugfix: EMAIL monitoring

v1204	Improvement: Update of FG8702D01 as extension board stabilized
v1203	Bugfix: Faulty default configuration with PTP as time source
v1202	Added: GNSS 2 as sync source in default configuration for boards with two GNSS receivers Improvement: Firmware update stability
v1201	Bugfix: Incorrect display of HW timestamping error in active events
v1200	Added: Support of FG8702D01 Added: Action to download compatible SNMP MIB Added: Action to reset GNSS receiver Added: Active event if software version of system is not compatible with management card Added: Automatic restart of GNSS receiver when it blocks reception due to massive spoofing detection, because spoofing handling is performed on the application level Improvement: Configuration of GNSS receiver that supports NAVIC Improvement: Calculation of CPU performance Improvement: Internal logging Improvement: Fixed a potential issue that could cause startup failure Bugfix: Faulty report of software module error in event log Bugfix: LDAP for SSH login method
v1101	Added: Configuration for syslog port Added: Action for GNSS receiver debugging Improvement: Miscommunication handling of GNSS receiver Improvement / Bugfix: Internal memory handling Bugfix: Correction of satellite ID representation in ***huma***
v1100	Added: Support of FG8800M01

	Added: Monitoring events for system status (ST200) and board status (ST201) changes Added: LED blinking action for board position indication Added: Information if board needs to be rebooted after config has been applied Added: Board performance status page Added: Correction value for time and status byte 1 in SINEC H1 Added: Activate buttons for timezone offset and daylight saving time in system Added: North velocity, east velocity, down velocity, ground speed, heading of motion, height above ellipsoid and height above mean sea level in GNSS status, GNSS2 status and SNMP MIB Improvement: Added “@” as valid character for username and password Improvement: Cyber security hardening Improvement: SNMP stability for non-valid OIDs Improvement: Minimum character length of security name in SNMPv3 and SNMPv3 traps set to one character, maximum character length set to 32 characters Improvement: Jamming thresholds adjusted Improvement: Antenna short circuit detection thresholds adjusted Improvement: Startup procedure Improvement: Removed priority1 and priorty2 in PTP client configuration Bugfix: DST handling for specific begin day and end day constellations
v1001	Improvement: Fixed a potential issue that could cause startup failure Improvement: SNMP stability Bugfix: FG8101Gxx is consistently included in system reboot process
v1000	Added: Additional status values for PRP, Bonding and ETH interfaces Added: Action to clear network interface status counters Added: Additional status values for PTP as sync source Added: Additional status values for PTP as time service Added: Maximum accuracy clamping for PTP as time service

	Added: Configuration to redirect from HTTP to HTTPS Added: Configurable event for the network firewall triggered when configurable amount of network packets are blocked within a configurable time (NW203) Added: Configuration value for receiver jamming indication in advanced receiver settings for boards with standard and high precision GNSS receivers Added: Action to ping an IP address Added: Configuration to disable ETH interfaces Added: Active event shown if system uses default configuration when management board has been reequipped from none-management position to a management position Added: Configuration to close status relay permanently after device is started Added: Hint shown if unavailable interfaces are used for services Added: Snowflake symbol for freezed boards in ***huma*** aside Improvement: Cyber security hardening Improvement: GNSS status page restructured Improvement: Sync module communication and frequency control moved to sync setting general status Improvement: Deactivated all permission in default configuration for VIEWER role which leads to a disabled viewer user in default configuration Bugfix: Removed fourth GNSS configuration setting in boards with maximum precision GNSS receivers
v0900	Added: Support of FG8101G02 Added: Support of FG8701G01, FG8701G02 and FG8701G03 Added: Configurable event for successful user login (AC405) Added: SNMPv3 traps Added: Ignore UDP checksum, overwrite 0.0.0.0 source IP, enable VLAN ID appending, enable VLAN filter and PTP over PRP with 2 instances in PTP extended functionalities Added: Action for capturing network packets on ETH interfaces Added: Configuration of minimum needed satellites and minimum needed C/N0 in advanced satellites settings for GNSS

	Added: Sync source data of FG870xGxx has been added to display pages of FG8101G0x Improvement: Representation of GNSS reception quality. Satellite Quality is now represented as C/N0 in dBHz Improvement: Login names with format “name.surname” are permitted Improvement: Login names with only numbers are permitted Improvement: LDAP server certificates can be removed Bugfix: Network firewall rules for PTP with a PRP-interface were fixed
v0800	Added: FG8702G04, FG8702G05, FG8702G06, FG8702G11, FG8702G12, FG8702G13, FG8702G14 and FG8702G15 support Added: PTP v2.0 compatibility mode Added: Action to set current number of leap seconds Added: SNMP MIB values for GNSS2 (gnss2SatTracked, gnss2JammingState, gnss2SpoofingState, gnss2AntennaOpenDetected, gnss2AntennaShortCircuitDetected) Added: Status information about the current number of leap seconds Improvement: Additional information about network status (duplex, speed, auto-negotiation) Improvement: Remote IPs of firewall rules can be set with CIDR-notation Bugfix: huma®-access with PRP via RedBox fixed Bugfix: PTP with IPv4/E2E via PRP fixed
v0701	No changes, only firmware version increased
v0700	Added: Support of SINEC H1 time service (this feature requires an activation key) Added: Support for PTP Profile ITU-T G8275.1 Improvement: PTP time service configuration per network interface Improvement: PTP time service output for UTC and arbitrary time in addition to TAI Improvement: Minimum sync accuracy configuration for PTP Improvement: SYSLOG support for up to 32 servers

	Improvement: SNMP v2 and v3 can now be enabled / disabled separately Improvement: Scalar values of the SNMP MIB can now be requested with trailing .0 Improvement: SNMP boardsVarTable index can now be added at the end of the OID Improvement: SNMP MIB entries timeServiceNtpStratum, gnssAntennaOpenDetected and gnssAntennaShortCircuitDetected added Improvement: SNMP response time improved Improvement: NTP time service output configuration for UTC, STD or LOC Improvement: Support for increased number of 200 VLAN configurations Improvement: Improved representation of active events Improvement: PTP operation during simulation mode Bugfix: Removed possible problems in the leap second handling Bugfix: Removed a bug that caused problems, when DHCP was enabled but no DHCP server was reachable
v0601	Improvement: LED behaviour of FG8802S02 in huma®
v0600	Added: FG8801F02 support Added: NTS (RFC 8915) support Added: Trusted certificate support Improvement: Every “crystal” text changed to “holdover” Improvement: Update of card cover images Improvement: Antenna short circuit detection improved
v0502	Added: Synchronization Setting for stepping when offset >= 100ms Added: NTP Configuration - Holdover operation (Specific stratum while holdover, Always output NTP) Improvement: Set time is now also possible in normal operation mode (before it was only possible in simulation mode) Improvement: NTP behaviour with execute time jump
v0501	Added: FG8803S02 and FG8803S20 support

	Added: Immediate PTP service start configuration Added: PTP clock class 6 simulation mode Improvement: SNMPv3 MIB-2 Support Improvement: Removed 30s SNMP value caching Improvement: Feature to update whole system with one update file
v0201	Added DNS as service option in network firewall rules Bugfix: Fixed simulation mode issue Bugfix: Fixed RADIUS PAP with local as fallback
v0200	Added FG8802S00, FG8802S01, FG8802S02, FG8802S20 and FG8901P06 support Added GNSS firewall feature Added LI8100A04 and LI8100A05 support SIMATIC time service can now be configured for two broadcast addresses Reworked SNMP MIB Improved synchronization Improved bus communication
v0106	Bugfix: Fixed synchronisation issue
v0103	First released firmware version

FG8800M0x Firmware Release Notes

Firmware Version	Changes
v2001	Security: Resolving PHP issue (CVE-2026-109618, CVE-2026-109619) Security: Resolving OpenSSH issue (CVE-2026-59998, CVE-2026-59999, CVE-2026-60000, CVE-2026-60001) Bugfix: Fixed an issue where the user was logged out in ***huma*** after stopping a packet capture action Bugfix: Fixed an issue where the network statistics for eth1 were not updated
v2000	Added: Support for the year 2038 (Y2K38) issue Added: Support of FG8201G01 Added: Action for HTTPS certificate generation Added: Fan management feature Added: Action for fan testing Added: Different modes for timedomain representation on display Added: Upload of custom language file Added: CPU and memory usage as SNMP values Added: Showing which Activation Keys are used by each position Added: Configuration for persistent SNMPv3 engine ID Added: Action for downloading a list which shows blocked firewall packets Added: Password rules configuration Added: NTP client list feature (Status for max. 20 NTP clients and an action for downloading a list which shows all NTP clients) Added: Extended relay logic configuration functionality Added: Power management section with configurable custom PSU events Improvement: Responsive system and board layout across different browsers and zoom levels Improvement: Security hardening

	Bugfix: Adjusted the positions displayed in the toast notification indicating which positions need to be rebooted after a configuration change Bugfix: Step when offset >= 100ms functionality with NTP as sync source was not working correctly Bugfix: Fixed a false firewall warning when NTS (RFC8915) is enabled. Previously, the system incorrectly displayed a message stating that NTS was blocked by the firewall, even if a correct firewall rule was already in place. Bugfix: Added a missing warning if DNS is blocked by the firewall. Previously, the system showed no warning if DNS is configured, but there is no correct firewall rule in place. Bugfix: Fixed an issue that could cause the embedded to get stuck in the bootloader during startup.
v1301	No changes, only firmware version increased
v1300	Added: New update procedure for future firmware version v2001 Bugfix: Values of Max. accuracy clamping dropdown were not shown in extension boards Bugfix: EMAIL monitoring
v1204	Improvement: Update of FG8702D01 as extension board stabilized
v1203	No changes, only firmware version increased
v1202	Improvement: Firmware update stability
v1201	Bugfix: Incorrect display of HW timestamping error in active events
v1200	Added: Support of FG8702D01 Added: Action to download compatible SNMP MIB Added: Active event if software version of system is not compatible with management card Improvement: Calculation of CPU performance Improvement: Internal logging Improvement: Fixed a potential issue that could cause startup failure Bugfix: Faulty report of software module error in event log Bugfix: LDAP for SSH login method

v1101	Added: Configuration for syslog port Improvement / Bugfix: Internal memory handling
v1100	Added: Support of FG8800M01 Added: Monitoring events for system status (ST200) and board status (ST201) changes Added: LED blinking action for board position indication Added: Board performance status page Added: Information if board needs to be rebooted after config has been applied Added: Correction value for time and status byte 1 in SINEC H1 Added: Activate buttons for timezone offset and daylight saving time in system Improvement: Added “@” as valid character for username and password Improvement: Cyber security hardening Improvement: SNMP stability for non-valid OIDs Improvement: Startup procedure Improvement: Minimum character length of security name in SNMPv3 and SNMPv3 traps set to one character, maximum character length set to 32 characters
v1001	Improvement: Fixed a potential issue that could cause startup failure Improvement: SNMP stability Bugfix: FG8101Gxx is consistently included in system reboot process
v1000	Added: Additional status values for PRP, Bonding and ETH interfaces Added: Action to clear network interface status counters Added: Configuration to redirect from HTTP to HTTPS Added: Configurable event for the network firewall triggered when configurable amount of network packets are blocked within a configurable time (NW203) Added: Action to ping an IP address Added: Configuration to disable ETH interfaces

	Added: Active event shown if system uses default configuration when management board has been reequipped from none-management position to a management position Added: Configuration to close status relay permanently after device is started Added: Hint shown if unavailable interfaces are used for services Added: Snowflake symbol for freezed boards in ***huma*** aside Improvement: Cyber security hardening Improvement: Deactivated all permission in default configuration for VIEWER role which leads to a disabled viewer user in default configuration
v0900	Added: Support of FG8101G02 Added: Support of FG8701G01, FG8701G02 and FG8701G03 Added: Configurable event for successful user login (AC405) Added: SNMPv3 traps Added: Action for capturing network packets on ETH interfaces Added: Configuration of minimum needed satellites and minimum needed C/N0 in advanced satellites settings for GNSS Added: Sync source data of FG870xGxx has been added to display pages of FG8101G0x Improvement: Representation of GNSS reception quality. Satellite Quality is now represented as C/N0 in dBHz Improvement: Login names with format “name.surname” are permitted Improvement: Login names with only numbers are permitted Improvement: LDAP server certificates can be removed
v0800	Added: FG8702G04, FG8702G05, FG8702G06, FG8702G11, FG8702G12, FG8702G13, FG8702G14 and FG8702G15 support Added: SNMP MIB values for GNSS2 (gnss2SatTracked, gnss2JammingState, gnss2SpoofingState, gnss2AntennaOpenDetected, gnss2AntennaShortCircuitDetected) Added: Status information about the current number of leap seconds Improvement: Additional information about network status (duplex, speed, auto-negotiation)

	Improvement: Remote IPs of firewall rules can be set with CIDR-notation Bugfix: huma®-access with PRP via RedBox fixed
v0701	No changes, only firmware version increased
v0700	Added: Support of SINEC H1 time service (this feature requires an activation key) Improvement: SYSLOG support for up to 32 servers Improvement: SNMP v2 and v3 can now be enabled / disabled separately Improvement: Scalar values of the SNMP MIB can now be requested with trailing .0 Improvement: SNMP boardsVarTable index can now be added at the end of the OID Improvement: SNMP MIB entries timeServiceNtpStratum, gnssAntennaOpenDetected and gnssAntennaShortCircuitDetected added Improvement: SNMP response time improved Improvement: NTP time service output configuration for UTC, STD or LOC Improvement: Support for increased number of 200 VLAN configurations Improvement: Improved representation of active events Bugfix: Removed possible problems in the leap second handling Bugfix: Removed a bug that caused problems, when DHCP was enabled but no DHCP server was reachable
v0601	Improvement: LED behaviour for FG8802S02 in huma®
v0600	Added: FG8801F02 support Added: NTS (RFC 8915) support Added: Trusted certificate support Added: Synchronization setting for stepping when offset >= 100ms Improvement: Every “crystal” text changed to “holdover” Improvement: Update of card cover images
v0501	First released firmware version

FG8801F02 Firmware Release Notes

Firmware Version	Changes
v2001	Improvement: Internal communication to management card Bugfix: Fixed an issue where the network statistics for eth1 were not updated
v2000	Added: Support for the year 2038 (Y2K38) issue Added: NTP client list feature (Status for max. 20 NTP clients and an action for downloading a list which shows all NTP clients) Added: Action for downloading a list which shows blocked firewall packets Improvement: Optimized PTP clock classes calculation Improvement: PTP synchronisation stability Improvement: Security hardening Bugfix: Removed non-required PTP TLVs from messages in specific PTP profiles Bugfix: Fixed an issue causing the Ethernet link to never go up in Auto-Negotiation mode under certain conditions Bugfix: Fixed an issue that could cause the embedded to get stuck in the bootloader during startup.
v1301	Bugfix: TLV type of PTP Extended functionality “Use Padding TLV” changed to 0x8008
v1300	Added: New update procedure for future firmware version v2001 Added: PTP Extended functionality “Use Padding TLVs” Bugfix: Values of Max. accuracy clamping dropdown were not shown in extension boards
v1204	No changes, only firmware version increased
v1203	No changes, only firmware version increased
v1202	No changes, only firmware version increased
v1201	Bugfix: Incorrect display of HW timestamping error in boards

v1200	Improvement: Calculation of CPU performance Improvement: Internal logging Improvement: Fixed a potential issue that could cause startup failure Bugfix: Faulty report of software module error in event log
v1101	Improvement / Bugfix: Internal memory handling
v1100	Added: LED blinking action for board position indication Added: Board performance status page Added: Correction value for time and status byte 1 in SINEC H1 Improvement: Startup procedure Bugfix: Operation modes of Bonding and PRP were not applied. IMPORTANT: Differences between the operation modes of prp0/bond0 to eth0/eth1 may affect uplink connectivity
v1001	Improvement: Fixed a potential issue that could cause startup failure Improvement: SNMP stability Bugfix: FG8101Gxx is consistently included in system reboot process
v1000	Added: Additional status values for PRP, Bonding and ETH interfaces Added: Action to clear network interface status counters Added: Additional status values for PTP as time service Added: Maximum accuracy clamping for PTP as time service Added: Action to ping an IP address Added: Configuration to disable ETH interfaces Added: Hint shown if unavailable interfaces are used for services Improvement: Sync module communication and frequency control moved to sync setting general status
v0900	Added: Ignore UDP checksum, overwrite 0.0.0.0 source IP, enable VLAN ID appending, enable VLAN filter and PTP over PRP with 2 instances in PTP extended functionalities Added: Action for capturing network packets on ETH interfaces

v0800	Added: PTP v2.0 compatibility mode Added: Status information about the current number of leap seconds Improvement: Additional information about network status (duplex, speed, auto-negotiation) Improvement: Remote IPs of firewall rules can be set with CIDR-notation Bugfix: Uplink-detection of FG9000F02 SFP-module after power reset fixed Bugfix: PTP with IPv4/E2E via PRP fixed
v0701	Bugfix: hopf FG9000F02 support
v0700	Added: Support for 100Mbit SFP modules Added: Support of SINEC H1 time service (this feature requires an activation key) Added: Support for PTP Profile ITU-T G8275.1 Improvement: PTP time service configuration per network interface Improvement: PTP time service output for UTC and arbitrary time in addition to TAI Improvement: Minimum sync accuracy configuration for PTP Improvement: NTP time service output configuration for UTC, STD or LOC Improvement: Support for increased number of 200 VLAN configurations Improvement: Improved representation of active events Improvement: PTP operation during simulation mode Bugfix: Removed possible problems in the leap second handling Bugfix: Removed a bug that caused problems, when DHCP was enabled but no DHCP server was reachable
v0601	No changes, only firmware version increased
v0600	First released firmware version

FG8801N02 Firmware Release Notes

Firmware Version	Changes
v2001	Improvement: Internal communication to management card Bugfix: Fixed an issue where the network statistics for eth1 were not updated
v2000	Added: Support for the year 2038 (Y2K38) issue Added: NTP client list feature (Status for max. 20 NTP clients and an action for downloading a list which shows all NTP clients) Added: Action for downloading a list which shows blocked firewall packets Improvement: Optimized PTP clock classes calculation Improvement: PTP synchronisation stability Improvement: Security hardening Bugfix: Removed non-required PTP TLVs from messages in specific PTP profiles Bugfix: Fixed an issue that could cause the embedded to get stuck in the bootloader during startup.
v1301	Bugfix: TLV type of PTP Extended functionality “Use Padding TLV” changed to 0x8008
v1300	Added: New update procedure for future firmware version v2001 Added: PTP Extended functionality “Use Padding TLVs” Bugfix: Values of Max. accuracy clamping dropdown were not shown in extension boards
v1204	No changes, only firmware version increased
v1203	No changes, only firmware version increased
v1202	No changes, only firmware version increased
v1201	Bugfix: Incorrect display of HW timestamping error in active events
v1200	Improvement: Calculation of CPU performance

	Improvement: Internal logging Improvement: Fixed a potential issue that could cause startup failure Bugfix: Faulty report of software module error in event log
v1101	Improvement / Bugfix: Internal memory handling
v1100	Added: LED blinking action for board position indication Added: Board performance status page Added: Correction value for time and status byte 1 in SINEC H1 Improvement: Startup procedure
v1001	Improvement: Fixed a potential issue that could cause startup failure Improvement: SNMP stability Bugfix: FG8101Gxx is consistently included in system reboot process
v1000	Added: Additional status values for PRP, Bonding and ETH interfaces Added: Action to clear network interface status counters Added: Additional status values for PTP as time service Added: Maximum accuracy clamping for PTP as time service Added: Action to ping an IP address Added: Configuration to disable ETH interfaces Added: Hint shown if unavailable interfaces are used for services Improvement: Sync module communication and frequency control moved to sync setting general status
v0900	Added: Ignore UDP checksum, overwrite 0.0.0.0 source IP, enable VLAN ID appending, enable VLAN filter and PTP over PRP with 2 instances in PTP extended functionalities Added: Action for capturing network packets on ETH interfaces
v0800	Added: PTP v2.0 compatibility mode Added: Status information about the current number of leap seconds

	Improvement: Additional information about network status (duplex, speed, auto-negotiation) Improvement: Remote IPs of firewall rules can be set with CIDR-notation Bugfix: PTP with IPv4/E2E via PRP fixed
v0701	No changes, only firmware version increased
v0700	Added: Support of SINEC H1 time service (this feature requires an activation key) Added: Support for PTP Profile ITU-T G8275.1 Improvement: PTP time service configuration per network interface Improvement: PTP time service output for UTC and arbitrary time in addition to TAI Improvement: Minimum sync accuracy configuration for PTP Improvement: NTP time service output configuration for UTC, STD or LOC Improvement: Support for increased number of 200 VLAN configurations Improvement: Improved representation of active events Improvement: PTP operation during simulation mode Bugfix: Removed possible problems in the leap second handling Bugfix: Removed a bug that caused problems, when DHCP was enabled but no DHCP server was reachable
v0601	No changes, only firmware version increased
v0600	Added: NTS (RFC 8915) support Added: Trusted certificate support Added: Synchronization setting for stepping when offset >= 100ms
v0502	Added: NTP Configuration - Holdover operation (Specific stratum while holdover, Always output NTP) Improvement: NTP behaviour with execute time jump
v0501	Improvement: Internal communication improved Added: Immediate PTP service start configuration

	Added: PTP clock class 6 simulation mode
v0201	Added DNS as service option in network firewall rules
v0200	SIMATIC time service can now be configured for two broadcast addresses Events and alarms are forwarded to the management board for distribution Improved synchronization Improved bus communication
v0106	Bugfix: Fixed synchronisation issue
v0104	First released firmware version

FG8802Sxx Firmware Release Notes

Firmware Version	Changes
v0401	Bugfix: Max. frequency change handling
v0400	Added: LED blinking action for board position indication Improvement: DCF SIMEAS R modification outputs a 50ms pulse in 59th second Bugfix: Change of day, month and year in DCF
v0300	Added: DCF output with optional SIMEAS R modification Added: Status information about the current number of leap seconds Improvement: Leap second behaviour
v0200	Added: Synchronization setting for stepping when offset >= 100ms Improvement: Overcurrent detection improved
v0100	First released firmware version

FG8803Sxx Firmware Release Notes

Firmware Version	Changes
v0401	Bugfix: Max. frequency change handling
v0400	Added: LED blinking action for board position indication
v0300	Added: Support of ION 7550 string Added: Status information about the current number of leap seconds Improvement: Leap second behaviour
v0200	Added: Synchronization setting for stepping when offset >= 100ms Bugfix: Statusbits in Hopf Time Universal string adjusted Bugfix: Character 25 in SAT1703 string adjusted Bugfix: Characters 13 and 14 in IEC-103 string adjusted
v0100	First released firmware version

FG8901Pxx Firmware Release Notes

Firmware Version	Changes
v0202	Added: Input voltage monitoring for each individual power connector on DC-PSUs
v0201	Bugfix: Internal status data communication fixed
v0200	Added: LED blinking action for board position indication
v0102	First released firmware version