

# 8100 Product Series Firmware Release Notes

## Remark

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

## Changes

Product	Changes	Current firmware version	Previous firmware version
FG8101G01		v0200	v0200
FG8101G02		v0200	v0200
FG8701G01	X	v1203	v1202
FG8701G02	X	v1203	v1202
FG8701G03	X	v1203	v1202
FG8702D01	X	v1203	v1202
FG8702G01	X	v1203	v1202
FG8702G02	X	v1203	v1202
FG8702G03	X	v1203	v1202
FG8702G04	X	v1203	v1202
FG8702G05	X	v1203	v1202
FG8702G06	X	v1203	v1202
FG8702G11	X	v1203	v1202
FG8702G12	X	v1203	v1202
FG8702G13	X	v1203	v1202
FG8702G14	X	v1203	v1202
FG8702G15	X	v1203	v1202
FG8800M00	X	v1203	v1202
FG8800M01	X	v1203	v1202
FG8801F02	X	v1203	v1202
FG8801N02	X	v1203	v1202
FG8802S00		v0400	v0400
FG8802S01		v0400	v0400
FG8802S02		v0400	v0400
FG8802S20		v0400	v0400
FG8803S02		v0400	v0400
FG8803S20		v0400	v0400

FG8901P01		v0200	v0200
FG8901P02		v0200	v0200
FG8901P03		v0200	v0200
FG8901P04		v0200	v0200
FG8901P06		v0200	v0200

## FG8101Gxx Firmware Release Notes

<b>Firmware Version</b>	<b>Changes</b>
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

<b>Firmware Version</b>	<b>Changes</b>
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
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 <i>huma</i>

<p>v1100</p>	<p>Added: Support of FG8800M01</p> <p>Added: Monitoring events for system status (ST200) and board status (ST201) changes</p> <p>Added: LED blinking action for board position indication</p> <p>Added: Information if board needs to be rebooted after config has been applied</p> <p>Added: Board performance status page</p> <p>Added: Correction value for time and status byte 1 in SINEC H1</p> <p>Added: Activate buttons for timezone offset and daylight saving time in system</p> <p>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</p> <p>Improvement: Added "@" as valid character for username and password</p> <p>Improvement: Cyber security hardening</p> <p>Improvement: SNMP stability for non-valid OIDs</p> <p>Improvement: Minimum character length of security name in SNMPv3 and SNMPv3 traps set to one character, maximum character length set to 32 characters</p> <p>Improvement: Jamming thresholds adjusted</p> <p>Improvement: Antenna short circuit detection thresholds adjusted</p> <p>Improvement: Startup procedure</p> <p>Improvement: Removed priority1 and priority2 in PTP client configuration</p> <p>Bugfix: DST handling for specific begin day and end day constellations</p>
<p>v1001</p>	<p>Improvement: Fixed a potential issue that could cause startup failure</p> <p>Improvement: SNMP stability</p> <p>Bugfix: FG8101Gxx is consistently included in system reboot process</p>
<p>v1000</p>	<p>Added: Additional status values for PRP, Bonding and ETH interfaces</p> <p>Added: Action to clear network interface status counters</p> <p>Added: Additional status values for PTP as sync source</p>

	<p>Added: Additional status values for PTP as time service</p> <p>Added: Maximum accuracy clamping for PTP as time service</p> <p>Added: Configuration to redirect from HTTP to HTTPS</p> <p>Added: Configurable event for the network firewall triggered when configurable amount of network packets are blocked within a configurable time (NW203)</p> <p>Added: Configuration value for receiver jamming indication in advanced receiver settings for boards with standard and high precision GNSS receivers</p> <p>Added: Action to ping an IP address</p> <p>Added: Configuration to disable ETH interfaces</p> <p>Added: Active event shown if system uses default configuration when management board has been reequipped from none-management position to a management position</p> <p>Added: Configuration to close status relay permanently after device is started</p> <p>Added: Hint shown if unavailable interfaces are used for services</p> <p>Added: Snowflake symbol for freezed boards in <b>huma</b> aside</p> <p>Improvement: Cyber security hardening</p> <p>Improvement: GNSS status page restructured</p> <p>Improvement: Sync module communication and frequency control moved to sync setting general status</p> <p>Improvement: Deactivated all permission in default configuration for VIEWER role which leads to a disabled viewer user in default configuration</p> <p>Bugfix: Removed fourth GNSS configuration setting in boards with maximum precision GNSS receivers</p>
v0900	<p>Added: Support of FG8101G02</p> <p>Added: Support of FG8701G01, FG8701G02 and FG8701G03</p> <p>Added: Configurable event for successful user login (AC405)</p> <p>Added: SNMPv3 traps</p> <p>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</p> <p>Added: Action for capturing network packets on ETH interfaces</p>

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

	<p>Improvement: SYSLOG support for up to 32 servers</p> <p>Improvement: SNMP v2 and v3 can now be enabled / disabled separately</p> <p>Improvement: Scalar values of the SNMP MIB can now be requested with trailing .0</p> <p>Improvement: SNMP boardsVarTable index can now be added at the end of the OID</p> <p>Improvement: SNMP MIB entries timeServiceNtpStratum, gnssAntennaOpenDetected and gnssAntennaShortCircuitDetected added</p> <p>Improvement: SNMP response time improved</p> <p>Improvement: NTP time service output configuration for UTC, STD or LOC</p> <p>Improvement: Support for increased number of 200 VLAN configurations</p> <p>Improvement: Improved representation of active events</p> <p>Improvement: PTP operation during simulation mode</p> <p>Bugfix: Removed possible problems in the leap second handling</p> <p>Bugfix: Removed a bug that caused problems, when DHCP was enabled but no DHCP server was reachable</p>
v0601	<p>Improvement: LED behaviour of FG8802S02 in huma®</p>
v0600	<p>Added: FG8801F02 support</p> <p>Added: NTS (RFC 8915) support</p> <p>Added: Trusted certificate support</p> <p>Improvement: Every “crystal” text changed to “holdover”</p> <p>Improvement: Update of card cover images</p> <p>Improvement: Antenna short circuit detection improved</p>
v0502	<p>Added: Synchronization Setting for stepping when offset &gt;= 100ms</p> <p>Added: NTP Configuration - Holdover operation (Specific stratum while holdover, Always output NTP)</p> <p>Improvement: Set time is now also possible in normal operation mode (before it was only possible in simulation mode)</p> <p>Improvement: NTP behaviour with execute time jump</p>

v0501	<p>Added: FG8803S02 and FG8803S20 support</p> <p>Added: Immediate PTP service start configuration</p> <p>Added: PTP clock class 6 simulation mode</p> <p>Improvement: SNMPv3 MIB-2 Support</p> <p>Improvement: Removed 30s SNMP value caching</p> <p>Improvement: Feature to update whole system with one update file</p>
v0201	<p>Added DNS as service option in network firewall rules</p> <p>Bugfix: Fixed simulation mode issue</p> <p>Bugfix: Fixed RADIUS PAP with local as fallback</p>
v0200	<p>Added FG8802S00, FG8802S01, FG8802S02, FG8802S20 and FG8901P06 support</p> <p>Added GNSS firewall feature</p> <p>Added LI8100A04 and LI8100A05 support</p> <p>SIMATIC time service can now be configured for two broadcast addresses</p> <p>Reworked SNMP MIB</p> <p>Improved synchronization</p> <p>Improved bus communication</p>
v0106	<p>Bugfix: Fixed synchronisation issue</p>
v0103	<p>First released firmware version</p>

## FG8800M0x Firmware Release Notes

Firmware Version	Changes
v1203	No changes, only firmware version increased
v1202	Improvement: Firmware update stability
v1201	Bugfix: Incorrect display of HW timestamping error in active events
v1200	<p>Added: Support of FG8702D01</p> <p>Added: Action to download compatible SNMP MIB</p> <p>Added: Active event if software version of system is not compatible with management card</p> <p>Improvement: Calculation of CPU performance</p> <p>Improvement: Internal logging</p> <p>Improvement: Fixed a potential issue that could cause startup failure</p> <p>Bugfix: Faulty report of software module error in event log</p> <p>Bugfix: LDAP for SSH login method</p>
v1101	<p>Added: Configuration for syslog port</p> <p>Improvement / Bugfix: Internal memory handling</p>
v1100	<p>Added: Support of FG8800M01</p> <p>Added: Monitoring events for system status (ST200) and board status (ST201) changes</p> <p>Added: LED blinking action for board position indication</p> <p>Added: Board performance status page</p> <p>Added: Information if board needs to be rebooted after config has been applied</p> <p>Added: Correction value for time and status byte 1 in SINEC H1</p> <p>Added: Activate buttons for timezone offset and daylight saving time in system</p> <p>Improvement: Added "@" as valid character for username and password</p>

	<p>Improvement: Cyber security hardening</p> <p>Improvement: SNMP stability for non-valid OIDs</p> <p>Improvement: Startup procedure</p> <p>Improvement: Minimum character length of security name in SNMPv3 and SNMPv3 traps set to one character, maximum character length set to 32 characters</p>
v1001	<p>Improvement: Fixed a potential issue that could cause startup failure</p> <p>Improvement: SNMP stability</p> <p>Bugfix: FG8101Gxx is consistently included in system reboot process</p>
v1000	<p>Added: Additional status values for PRP, Bonding and ETH interfaces</p> <p>Added: Action to clear network interface status counters</p> <p>Added: Configuration to redirect from HTTP to HTTPS</p> <p>Added: Configurable event for the network firewall triggered when configurable amount of network packets are blocked within a configurable time (NW203)</p> <p>Added: Action to ping an IP address</p> <p>Added: Configuration to disable ETH interfaces</p> <p>Added: Active event shown if system uses default configuration when management board has been reequipped from none-management position to a management position</p> <p>Added: Configuration to close status relay permanently after device is started</p> <p>Added: Hint shown if unavailable interfaces are used for services</p> <p>Added: Snowflake symbol for freezed boards in <b>huma</b> aside</p> <p>Improvement: Cyber security hardening</p> <p>Improvement: Deactivated all permission in default configuration for VIEWER role which leads to a disabled viewer user in default configuration</p>
v0900	<p>Added: Support of FG8101G02</p> <p>Added: Support of FG8701G01, FG8701G02 and FG8701G03</p> <p>Added: Configurable event for successful user login (AC405)</p> <p>Added: SNMPv3 traps</p>

	<p>Added: Action for capturing network packets on ETH interfaces</p> <p>Added: Configuration of minimum needed satellites and minimum needed C/N0 in advanced satellites settings for GNSS</p> <p>Added: Sync source data of FG870xGxx has been added to display pages of FG8101G0x</p> <p>Improvement: Representation of GNSS reception quality. Satellite Quality is now represented as C/N0 in dBHz</p> <p>Improvement: Login names with format "name.surname" are permitted</p> <p>Improvement: Login names with only numbers are permitted</p> <p>Improvement: LDAP server certificates can be removed</p>
v0800	<p>Added: FG8702G04, FG8702G05, FG8702G06, FG8702G11, FG8702G12, FG8702G13, FG8702G14 and FG8702G15 support</p> <p>Added: SNMP MIB values for GNSS2 (gnss2SatTracked, gnss2JammingState, gnss2SpoofingState, gnss2AntennaOpenDetected, gnss2AntennaShortCircuitDetected)</p> <p>Added: Status information about the current number of leap seconds</p> <p>Improvement: Additional information about network status (duplex, speed, auto-negotiation)</p> <p>Improvement: Remote IPs of firewall rules can be set with CIDR-notation</p> <p>Bugfix: huma@-access with PRP via RedBox fixed</p>
v0701	<p>No changes, only firmware version increased</p>
v0700	<p>Added: Support of SINEC H1 time service (this feature requires an activation key)</p> <p>Improvement: SYSLOG support for up to 32 servers</p> <p>Improvement: SNMP v2 and v3 can now be enabled / disabled separately</p> <p>Improvement: Scalar values of the SNMP MIB can now be requested with trailing .0</p> <p>Improvement: SNMP boardsVarTable index can now be added at the end of the OID</p> <p>Improvement: SNMP MIB entries timeServiceNtpStratum, gnssAntennaOpenDetected and gnssAntennaShortCircuitDetected added</p> <p>Improvement: SNMP response time improved</p>

	<p>Improvement: NTP time service output configuration for UTC, STD or LOC</p> <p>Improvement: Support for increased number of 200 VLAN configurations</p> <p>Improvement: Improved representation of active events</p> <p>Bugfix: Removed possible problems in the leap second handling</p> <p>Bugfix: Removed a bug that caused problems, when DHCP was enabled but no DHCP server was reachable</p>
v0601	<p>Improvement: LED behaviour for FG8802S02 in huma®</p>
v0600	<p>Added: FG8801F02 support</p> <p>Added: NTS (RFC 8915) support</p> <p>Added: Trusted certificate support</p> <p>Added: Synchronization setting for stepping when offset &gt;= 100ms</p> <p>Improvement: Every "crystal" text changed to "holdover"</p> <p>Improvement: Update of card cover images</p>
v0501	<p>First released firmware version</p>

## FG8801F02 Firmware Release Notes

Firmware Version	Changes
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. <b>IMPORTANT:</b> 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

	<p>Added: Action to ping an IP address</p> <p>Added: Configuration to disable ETH interfaces</p> <p>Added: Hint shown if unavailable interfaces are used for services</p> <p>Improvement: Sync module communication and frequency control moved to sync setting general status</p>
v0900	<p>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</p> <p>Added: Action for capturing network packets on ETH interfaces</p>
v0800	<p>Added: PTP v2.0 compatibility mode</p> <p>Added: Status information about the current number of leap seconds</p> <p>Improvement: Additional information about network status (duplex, speed, auto-negotiation)</p> <p>Improvement: Remote IPs of firewall rules can be set with CIDR-notation</p> <p>Bugfix: Uplink-detection of FG9000F02 SFP-module after power reset fixed</p> <p>Bugfix: PTP with IPv4/E2E via PRP fixed</p>
v0701	<p>Bugfix: hopf FG9000F02 support</p>
v0700	<p>Added: Support for 100Mbit SFP modules</p> <p>Added: Support of SINEC H1 time service (this feature requires an activation key)</p> <p>Added: Support for PTP Profile ITU-T G8275.1</p> <p>Improvement: PTP time service configuration per network interface</p> <p>Improvement: PTP time service output for UTC and arbitrary time in addition to TAI</p> <p>Improvement: Minimum sync accuracy configuration for PTP</p> <p>Improvement: NTP time service output configuration for UTC, STD or LOC</p> <p>Improvement: Support for increased number of 200 VLAN configurations</p> <p>Improvement: Improved representation of active events</p> <p>Improvement: PTP operation during simulation mode</p>

	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
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

	<p>Added: Hint shown if unavailable interfaces are used for services</p> <p>Improvement: Sync module communication and frequency control moved to sync setting general status</p>
v0900	<p>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</p> <p>Added: Action for capturing network packets on ETH interfaces</p>
v0800	<p>Added: PTP v2.0 compatibility mode</p> <p>Added: Status information about the current number of leap seconds</p> <p>Improvement: Additional information about network status (duplex, speed, auto-negotiation)</p> <p>Improvement: Remote IPs of firewall rules can be set with CIDR-notation</p> <p>Bugfix: PTP with IPv4/E2E via PRP fixed</p>
v0701	<p>No changes, only firmware version increased</p>
v0700	<p>Added: Support of SINEC H1 time service (this feature requires an activation key)</p> <p>Added: Support for PTP Profile ITU-T G8275.1</p> <p>Improvement: PTP time service configuration per network interface</p> <p>Improvement: PTP time service output for UTC and arbitrary time in addition to TAI</p> <p>Improvement: Minimum sync accuracy configuration for PTP</p> <p>Improvement: NTP time service output configuration for UTC, STD or LOC</p> <p>Improvement: Support for increased number of 200 VLAN configurations</p> <p>Improvement: Improved representation of active events</p> <p>Improvement: PTP operation during simulation mode</p> <p>Bugfix: Removed possible problems in the leap second handling</p> <p>Bugfix: Removed a bug that caused problems, when DHCP was enabled but no DHCP server was reachable</p>
v0601	<p>No changes, only firmware version increased</p>

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

<b>Firmware Version</b>	<b>Changes</b>
v0400	Added: LED blinking action for board position indication  Improvement: DCF SIMEAS R modification outputs a 50ms pulse in 59 <sup>th</sup> 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 $\geq$ 100ms  Improvement: Overcurrent detection improved
v0100	First released firmware version

## FG8803Sxx Firmware Release Notes

<b>Firmware Version</b>	<b>Changes</b>
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 $\geq$ 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

<b>Firmware Version</b>	<b>Changes</b>
v0200	Added: LED blinking action for board position indication
v0102	First released firmware version