



MADE IN EUROPE | CRA READY

SYNTHERAEDGE-S



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Hardware & Features:

CPU Core

CPU NXP i.MX8M Plus, quad-core
ARM Cortex-A53, 1.6GHz + NPU

Real-Time
Co-processor ARM Cortex-M7

Memory and storage

RAM 2GB, LPDDR4 onboard

Primary
Storage 16GB eMMC flash onboard

Internal interfaces

PCI Express 1x M.2 slot M, Type 2242 for
additional Mass Storage (option)
1x M.2 slot E, Type 2230 for
Wifi/BT (option)

2x miniPCIe slots
used for LTE or LoRaWAN module

Optional
interfaces eSIM
MicroSD card
I²C

External interfaces

LAN 2x 1000Mbps Ethernet port,
RJ45 connector

USB 2x USB2.0 ports, type-A
2x USB3.0 ports, type-A
1x USB OTG

SIM Dual SIM socket

Antennas 2x LTE antennas (Main + Diversity)
1x LoRaWAN antenna

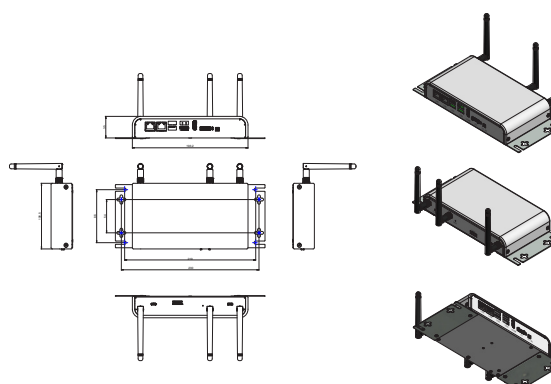
Display 1x HDMI

Industrial
I/O 1x CAN
connector 1x RS232
1x RS485
8x GPIO

Debug
connector 1x serial console via
UART-to-USB bridge
micro-USB connector

Power
connector 1x Power IN
(2-pin Phoenix connector)

Reset Button Software controlled for Factory
default settings accessible
through hole in housing



System

Security Secure boot, TPM2.0 implemented
with Infineon SLB9672

RTC Real time clock operated from
on-board coin-cell battery

Electrical specifications

Power Supply DC input: unregulated,
12V to 24V +/-5%
Reverse voltage protection

Compliance planned

Regulatory CE (incl. RED), RoHS, REACH

EMC EN IEC 61000-6-2,
EN IEC 61000-6-4

Safety EN 62368-1

Reliability and environmental

MTBF > 200.000 hours

Operation
Temperature 0° to 60° C

Storage
Temperature -40° to 85° C

Relative
Humidity 10% to 90% (operation)
05% to 95% (storage)

Future proof design

SMARC
Standard possible to use ARM/x86 based
SMARC CPU Modules

optional
features (assembly
options) optional 2500Mbps Ethernet for
both ports,
LVDS with Backlight via PIN header
eSIM

Product Variants

Variant	LTE	LoRaWAN	Antennas
SyntheraEdge-S LTE	✓	-	2x LTE
SyntheraEdge-S LoRaWAN	-	✓	1x LoRaWAN
SyntheraEdge-S LTE & LoRaWAN	✓	✓	2x LTE + 1x LoRaWAN