

Global 5G connectivity for IoT

Availability
Q3/2020

MV31-W

5G / 4G / 3G



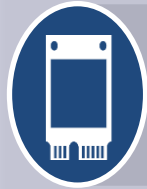
Applications & use cases

- Routers
- Gateways
- Tablets & laptops
- Video Surveillance



Supporting the whole 5G spectrum

- Sub 6GHZ operation, with optional millimeter wave support
- Global 5G coverage on one single SKU
- LTE Cat. 20 fallback



Most compact plug and play M.2 data card

- Compact standard 30x42 M.2 with PCIe3.0 and USB3.1 interface options
- Plug and play support of Windows® 10, Linux and Android



Flexible Network usage

- Dual SIM support with Dual Standby Single Active support
- Main MNOs approval
- Flexible SIM support: Consumer and M2M eSIM with onboard option



True Industrial IoT

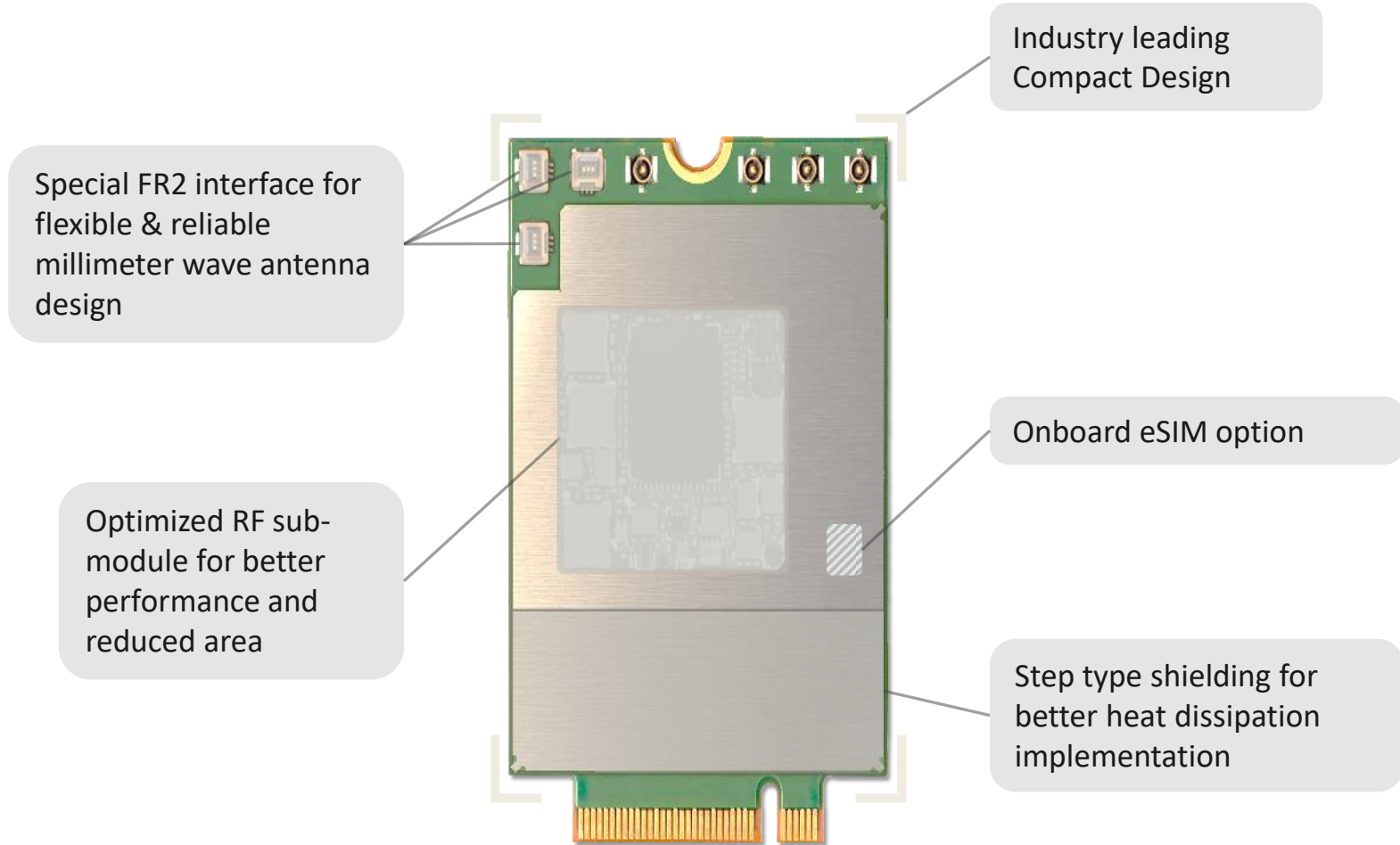
- Temp: -40 to +85 C°
- Advanced temperature management
- Special heat dissipation design



Proven cellular configuration

- Unique RF Core encapsulates complexity and increases reliability
- Core cellular configuration tested and approved in high volume computing application

MV31-W Product Design Overview



Thermal efficiency by design

- Revolutionary double sided PCB design – RF on both sides of PCB
 - Unique double sided design
 - Stepped Shielding for improved temperature profile
 - Enhanced heat dissipation
 - Longer operational life
 - Advanced temperature management mechanism



MV31-W

5G sub-6GHz and millimeterwave



Ultra High Speed IoT

Ultra high speed data speeds up to 6 Gbps for static applications with need for super fast data rates in a compact and standard M.2 footprint to easily upgrade from 4G.

- 5G/4G/3G Multi-mode module with M.2 form factor, optimized for IoT and eMBB applications
- Worldwide coverage in single SKU
- Support SA and NSA
- 3G fallback
- Smallest 5G M.2 data card 30x42
- Optional mmWave support
- 4x4 MIMO (4 antenna interfaces)
- Dual frequency GNSS
- Dual SIM with embedded eSIM support

MV31-W

Cinterion® 5G M.2 Modem Card (data only) 5G connectivity for IoT



Ultra High Speed IoT

GENERAL FEATURES

- 5G SA and NSA (3GPP Release 15)
 - FDD-LTE Bands: n1, n2, n3, n5, n7, n12, n20, n25, n28, n66, n71
 - TD-LTE Bands: n38, n41, n77, n78, n79
 - mmWave: n257, n258, n260, n261
- LTE Advanced-Pro (3GPP Release 15)
 - FDD-LTE Bands: 1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 17, 18, 19, 20, 25, 26, 28, 29, 30, 32, 66, 71
 - TD-LTE Bands: 34, 38, 39, 40, 41, 42, 43, 46, 48
- UMTS/HSPA+ (3GPP Release 8):
 - FDD Bands: 1, 2, 4, 5, 6, 8, 9, 19
- Integrated Dual Frequency GNSS:
 - L1 (GPS, Glonass, Beidou, Galileo)
 - L5 (GPS, Beidou, Galileo)
- SIM Application Toolkit
- Supply voltage range 3.3 V (+/- 5%)
- Dimensions: 30mm x 42mm x 2.5 mm
- Data only

SPECIFICATIONS

- 5G sub6GHz: 200 MHz, 4x4 DL-MIMO, 2x2 UL-MIMO
- 5G mmWave: 800 MHz, 2x2+4CC or 1x1+8CC, DL/UL max: 6 Gbps / 2 Gbps
- 4G DL-Cat.22 up to 7x20 MHz, UL-Cat.13 up to 3x20 MHz, DL/UL max: 2 Gbps/150 Mbps
- HSPA+ Dual Carrier DL Cat. 24 / UL Cat. 6, DL/UL max: 42 Mbps / 11 Mbps
- UMTS DL/UL: max. 384 kbps
- SMS text and PDU mode
- Control via AT commands (Hayes, 3GPP TS 27.007 and 27.005)

APPROVALS

- RED, FCC, IC, UL, GCF, PTCRB, REACH
- California RoHS, China RoHS2, WEEE compliant
- MNOs supported: AT&T, Verizon, Vodafone, Telefonica/O2, Swisscom, Telstra, Optus, NTT Docomo, Softbank, China Mobile, China Unicom, China Telecom

INTERFACES (34 pin Edge Connector)

- PCIe3.0 / USB 3.1
- SIM Interface card holder (USIM IF#1)
- 4 MHF4 onboard connectors for Sub6GHz 4x4 shared with GNSS
- 3 2in1 IF connectors for mmWave antennas

DRIVERS

- Windows® 10
- Linux®
- Android

SPECIAL FEATURES

- Dual SIM support with Dual Standby Single Active support
- Optional eSIM on module

