Evolution iConnex e850mp Series

Integrated Board

Portable, Powerful and Secure IP Broadband Connectivity

Extremely compact and lightweight boards, the iConnex e850mp and the iConnex e850mp-IND are designed to be easily integrated into a portable VSAT solution. This iConnex series meets the most rigorous demands for mobility and security, delivering always-on broadband capabilities into smaller form factors that support data, voice, and video connectivity in highly mobile military and government applications. The e850mp-IND has been industrialized to MIL Standard requirements for extreme operational conditions.

Maximum Portability

Approximately seventy percent smaller surface area than our state-of-the-art e8350 router and half the size of the iConnex e800 board, the e850mp and the e850mp-IND allow for maximum customization into a portable router solution that can be easily transported by a single person or mobile vehicle, making it ideal for Communications-on-the-Move (COTM), emergency response, and for command and control applications in the field.

Combined with leading spread spectrum technology, this iConnex series enables the use of ultra-small and phased-array antennas on aircrafts, ships, and land-based vehicles. The iConnex e850mp series is fully enabled for iDirect's Global Network Management System (GNMS) and automatic beam switching technology allowing for a seamless network with truly global coverage while on the move.

Greater Flexibility

The iConnex e850mp series offers the choice between DVB-S2/ ACM or iNFINITI TDM on the outbound, providing even more flexibility for network design and bandwidth optimization.

High Security

Compliant with the highest military security requirements, the iConnex e850mp series features embedded AES encryption and TRANSEC with advanced FIPS 140-2 Level 2 compliance. Also, to support Wideband Global Satellite (WGS) frequency ranges, the e850mp series is equipped to cover wider IF ranges, providing flexibility in secure network deployment.

Superior Quality of Service

With iDirect's state-of-the-art Group QoS, high-priority traffic designation can be recognized by advanced encryption devices and traffic can be segregated by groups of remotes, multiple sub-networks, and multiple applications, ensuring the highest quality transmissions where needed.

Simple, Intuitive Network Management

Service providers can easily configure and centrally manage each individual unit though the iVantage™ network management system, a complete suite of software-based tools for configuring, monitoring and controlling networks from one location.
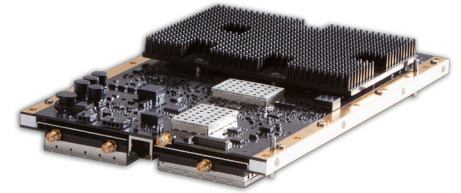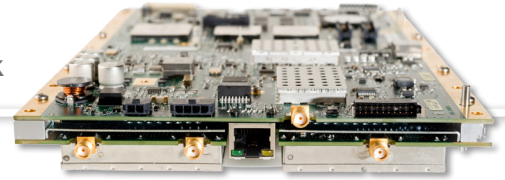

e850mp-FIPSL2

Features

- Extremely compact and lightweight
- Star topology
- High carrier data rates up to 149 Mbps outbound, 11.1 Mbps in TDMA and 20 Mbps in SCPC Return
- Flexible modes of operation: DVB-S2/ ACM outbound and iNFINITI outbound
- Next-generation, extremely efficient 2D 16-State inbound coding
- Spread spectrum waveform technology supports very small antennas and COTM applications
- Unique TRANSEC security with AES 256-bit encryption
- Advanced QoS and traffic prioritization options
- Supports WGS IF ranges: 950- 2000 MHz
- Optional conformal coating and heat sink (e850mp-IND)

Stay connected. Stay informed. The mission depends on it.

iDirect Government   503H8
1214

Evolution 8000 Series
Integrated Board
iConnex e850mp, iConnex e850mp-FIPSL2,
iConnex e850mp-IND, iConnex e850mp-IND with Heat Sink

e850mp shown

Configuration

		Downstream DVB-S2/ACM or (iNFINITI TDM)	Upstream D-TDMA or (SCPC Return*)
Network Topology	Star		
Modulation		QPSK, 8PSK, 16APSK (BPSK, QPSK, 8PSK)	BPSK, QPSK, 8PSK (BPSK, QPSK, 8PSK)
FEC		LDPC, 0.25–0.9 (TPC, 0.495–0.879)	TPC**, 0.431–0.793 2D 16S,1/2-6/7 (2D 16 State 1/2- 6/7)
Maximum Rates	Symbol	45 Msps (15 Msps)	7.5 Msps (15 Msps)
	Info	150 Mbps[1] (21 Mbps[2])	12.8 Mbps[4] (24 Mbps[5])
	Line Card IP Data	149 Mbps[1] (20 Mbps[2])	11.1 Mbps[4] (20 Mbps[5])
	Remote IP Data	38.5 Mbps[1] (17 Mbps[3])	11.1 Mbps[4] (20 Mbps[5])

Notes: [1] 16APSK 8/9 FEC;   [2] QPSK, .897 FEC;   [3] QPSK, .793 FEC;   [4] QPSK 6/7 FEC;   [5] QPSK 4/5 FEC
Maximum downstream and upstream data rates cannot be achieved simultaneously
Maximum rates are achieved with optimal configurations

Spread Spectrum	Spreading Factor (TDM: 2, 4 and 8)		1, 2, 4, 8, and 16 (SCPCR: 2, 4 and 8)
	Max Chip Rate (TDM: 15 Mcps)		7.5 Mcps (SCPC Return: 15 Mcps)

Interfaces

SatCom Interfaces	TX Out: Type-SMA, 950–2000 MHz, +5dBm/-35dBm RX In: Type-SMA, 950–2000 MHz, -5dBm (max) composite/ -130+10*log(Fsym)dBm (min) single carrier RX Out: Type-SMA, 950–2000 MHz Software controllable 10 MHz reference on TX Out
Data Interfaces	LAN: Single 10/100 Mbps Ethernet Console: RS-232 Console connection RS-232: GPS input or Antenna Control Signaling 10 MHz: External reference clock (future release)
Protocols Supported	TCP, UDP, ICMP, IGMP, RIP v2,Static Routes, NAT, DHCP, DHCP Helper, Local DNS Caching, OpenAMIP, cRTP, and GRE
Security	AES Link Encryption (256-bit), TRANSEC (iNFINITI and S2 modes), FIPS 140-2 Level 2 Compliant (optional), x.509 digital certificates authentication, Automatic Key Management
Traffic Engineering	Group QoS, QoS (Priority Queuing and CBWFQ), Strict Priority Queuing, Application Based QoS, Minimum CIR, CIR (Static and Dynamic), Rate Limiting
Other Features	Built-in Automatic Uplink Power, Frequency and Timing Control, Authentication, Antenna Control Interface (OpenAMIP)

Mechanical/Environmental

Size	Models e850mp, e850mp-IND: W 10.35 in x D 6.675 in x H 1.24 in (W 26.29 cm x D 16.95 cm x H 3.15 cm) Models e850mp-FIPSL2, e850mp-IND with Heat Sink: W 10.35 in x D 6.675 in x H 1.6 in (W 26.29 cm x D 16.95cmxH4.1cm)
Weight	Models e850mp, e850mp-IND: 2.0 lbs (0.9 Kg) Models e850mp-FIPSL2, e850mp-IND with Heat Sink: 2.6 lbs (1.18kg)
Operating Temperature	-20° to +60°C (-4° to +140°F) at Sea Level with temperature change of 1°C per 1 min
Altitude	Operational: Up to 10,000 feet (3048m); Storage: up to 30,000 feet (9144m)
Relative Humidity	Model e850mp: Max 92% non condensing humidity (operational & storage) Models e850mp-FIPSL2, e850mp-IND with and without Heat Sink: Max 95% non-condensing humidity (operational) Models e850mp-FIPSL2, e850mp-IND with and without Heat Sink: Max 100% condensing humidity (storage)
Input Voltage	+24V

*   SCPC Return can only be operated when using DVB-S2/ACM*
**   TPC not supported for use with DVB-S2 outbound in iDX 3.0 and above