

Specifications

		iPASOLINK 200	iPASOLINK 400	iPASOLINK 1000
Frequency		6/7/8/10/11/13/15/18/23/26/28/32/38 GHz		
Modulation and AMR Modulation Range		QPSK/16/32/64/128/256 QAM		
XPIC and Radio Traffic Aggregation		Supported		
Radio Nodal Capability		2-way	4-way	12-way
Interfaces	Basic	16xE1+2xFE+2xGbE		4xGbE
	Additional	16xE1 card chSTM-1 card MSE card (16xE1 PWE)	16xE1 card chSTM-1 card 4xGbE card MSE card (64xE1 PWE) 10GbE card (for iPASOLINK 1000) CWDM card (for iPASOLINK 1000)	
Packet Functionality		Port-based and Tag-based VLAN CoS/ToS/Diffserv/MPLS EXP based Priority Control Strict Priority, D-WRR with Bandwidth Management Policing with CIR/EIR		
Synchronization		Synchronous Ethernet	Synchronous Ethernet IEEE 1588v2	
Radio Protection		HS/HS, HS/SD, FD		
TDM Cross-Connect		E1 Cross-Connect with ADM for Radio and chSTM-1		
Resiliency	Packet	RSTP	RSTP, ITU-T G.8031/8032v2, MPLS 1+1/Facility Protection, PWE Redundancy	
	TDM	E1 SNCP with Radio Ring		
Ethernet OAM		IEEE 802.1ag Service OAM and ITU-T Y.1731 PM		
Ambient Temperature		IDU: -5 to +50°C ODU: -33 to +50°C		
Power Line Voltage		-48 VDC (-40.5 to -57 VDC)		
Power Consumption	ODU	29W (6-11G), 19W (13-38G) / 1+0		
	IDU	60W (1+0) / 65W (1+1)	75W (1+0) / 90W (1+1)	90W (1+0) / 110W (1+1)
Dimensions and Weight	ODU	6-8 GHz: 237 (W) x 237 (H) x 101 (D) mm, 3.5 kg approx. 10-38 GHz: 239 (W) x 247 (H) x 68 (D) mm, 3.0 kg approx.		
	IDU	482 (W) x 44 (H) x 240 (D) mm, 3 kg approx.	482 (W) x 44 (H) x 240 (D) mm, 4 kg approx. (1+0)	482 (W) x 132 (H) x 240 (D) mm, 6 kg approx. (1+0)

Specifications are subject to change without notice.

Abbreviations

ADM Add-Drop Multiplexer	GBE Gigabit Ethernet	ODU Outdoor Unit	SD Space Diversity
ATM Asynchronous Transfer Mode	HS Hot Standby	OPEX Operation Expenditure	SDH Synchronous Digital Hierarchy
BSC Mobile Base Station Controller	IDU Indoor Unit	PIR Peak Information Rate	SFP Small Form-factor Pluggable
CAPEX Capital Expenditure	IEEE Institute of Electrical and Electronics Engineers	PWE Pseudo Wire Emulation	STM-1 Synchronous Transport Module level 1
CIR Committed Information Rate	IP Internet Protocol	QAM Quadrature Amplitude Modulation	TDM Time Division Multiplexing
CoS Class of Service	LTE Long Term Evolution	QoS Quality of Service	ToS Type of Service
D-WRR Deficit-Weighted Round Robin	MME Mobility Management Entity	RNC Radio Network Controller	UPE User Plane Entity
EIR Excess Information Rate	MSE Multi Service Engine	RST Regenerator Section Termination	VLAN Virtual LAN
FD Frequency Diversity	OAM Operations, Administration, Maintenance	RSTP Rapid Spanning Tree Protocol	XPIC Cross Polarization Interference Canceller
FE Fast Ethernet			

Converged Packet Radio

iPASOLINK 200/400/1000

Next Generation Packet Nodal Radio



iPASOLINK Converged Packet Radio for Next Generation Mobile Backhaul

NEC's Intelligent Converged Platform is designed to meet the capacity, topology, flexibility and intelligence requirements of next-generation mobile backhaul. It comprises the evolution of NEC's mobile backhaul solution portfolio and it builds on NEC's global market leadership. At the core of the Intelligent Converged Platform is iPASOLINK, the Converged Packet Radio.

iPASOLINK is a modular network element that integrates a comprehensive set of TDM cross-connect switching, packet switching and microwave/optical features, resulting in reduced costs and a long investment lifetime. The following iPASOLINK series cover mobile backhaul requirements all the way from the access tail links through to the metro aggregation network:

- iPASOLINK 200: Capacity-optimized packet radio for the extension of reach and capacity
- iPASOLINK 400: Nodal packet radio for multiservice aggregation and bandwidth management
- iPASOLINK 1000: Packet transport nodal for radio and optical network integration

NEC's iPASOLINK is supported by a strong suite of professional services and high-quality engineering. It is compatible with NEC's market-leading PASOLINK microwave portfolio of products. iPASOLINK will help Mobile Network Operators address backhaul migration challenges and realize low cost of ownership.

Feature-rich, flexible and ultra-compact solution

Converged Packet Radio for LTE Backhaul

- iPASOLINK is the first set of products developed within NEC's next-generation Intelligent Converged Platform

Design Concept

- Any transport of Native Ethernet for 3G/LTE and Native TDM for 2G and mix for risk-free migration
- Optimized, scalable and high capacity link throughput
- High-level resiliency for carrier-grade services
- Transmission over both microwave and optical
- Carrier-grade migration from TDM to full IP Backhaul
- Application flexibility and software upgradeability

Reassurance for future changes in network capability

- Application flexibility with universal card slots and a range of functional modules
- Easy addition of functionality with pay-as-you-need software upgrades
- Reuse of existing PASOLINK – No.1 microwave product – with backward compatibility

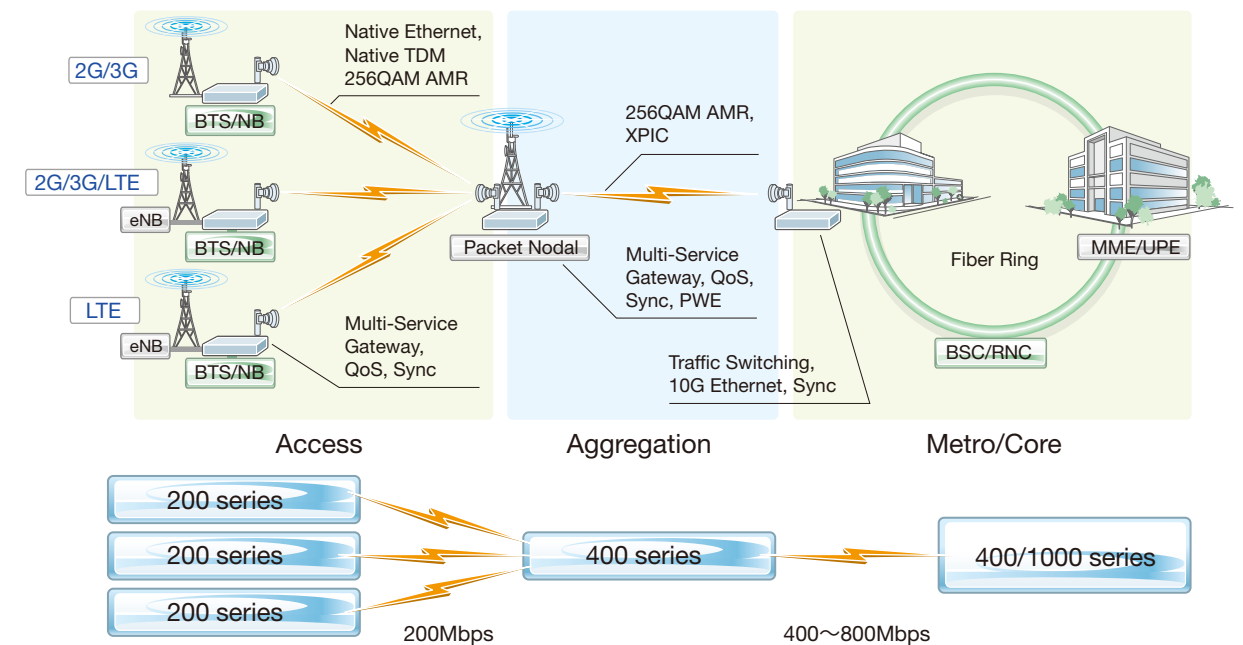
Advanced technology for carrier-grade services

- High throughput with high modulations, wide channels and cross-polarization
- Ultra-high-capacity radio with XPIC technology in 1U ultra-compact size unit
- Flexible and high resiliency radio configuration, N-way, 1+1 and N+0
- High system gain with advanced error correction and new amplifier technology
- High level of packet networking functionality: Ethernet, PWE, MPLS, IP
- Advanced multi-service QoS support for TDM, ATM, Ethernet and IP with microwave adaptive modulation and excellent header compression technology
- Ethernet OAM for fault management and performance monitoring
- Multiple clock sources: external, synchronous Ethernet and legacy TDM synchronization

Optimised cost of ownership

- Low CAPEX as technology convergence reduces the number of hardware units
- Low OPEX with enhanced remote management and control
- Low OPEX of reduced maintenance due to high engineering quality

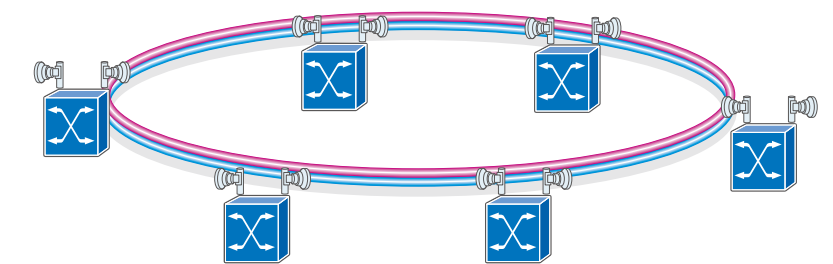
The iPASOLINK series brings together top-class radio performance and a vast array of multi-service transport and traffic engineering functions to address the needs of the Last Mile, Aggregation and Metro network.



Optimized migration to all-packet LTE Backhaul with iPASOLINK

The iPASOLINK series supports various kinds of protection mechanism to manage the carrier-grade service resiliency.

- Radio Link
 - 1+1 Hot Standby, Space Diversity, Frequency Diversity
 - Radio Traffic Aggregation
- Ethernet Link
 - RSTP
 - ITUT-R G.8032v2 Ring
 - ITUT-R G.8031 Linear
 - Link Aggregation
 - PWE Redundancy
 - MPLS 1+1/Facility Protection
- TDM Link
 - SNCP Ring



Ethernet and PDH Ring (example)

Carrier-class resiliency for both TDM and Ethernet services

The iPASOLINK series supports Native TDM, Native Ethernet and All IP for risk free migration.

iPASOLINK 200: Capacity optimized packet radio



iPASOLINK 200

iPASOLINK 400/1000: Nodal packet radio



iPASOLINK 400

iPASOLINK Main Features

- Radio Link
 - Native TDM, Native Ethernet and all IP
 - 256QAM AMR with QoS
 - Throughput: 10Mbps to 800Mbps with XPIC
 - Radio Traffic Aggregation
- TDM Link
 - Super PDH more than 75xE1
 - Channelized STM-1/ STM-1 RST
 - Add-Drop Multiplexer
- Ethernet Link
 - SP + D-WRR QoS
 - Ethernet OAM
- All IP
 - Pseudo Wire for IP migration
 - Multiple clock sources for synchronization

Configuration flexibility and upgradeability to next-generation technologies