Yitran

IT900 DCSK TURBO

The next generation in Powerline Communication (PLC) networking at 500kbps, IT900 DCSK Turbo provides upper layer support for SE 1.0, SE 2.0, IPv4 and IPv6. IT900 is the first fully integrated PLC modem and application solution on a single chip to feature DCSK Turbo speed and robustness.

HOME/BUILDING AUTOMATION APPLICATIONS

HVAC Control
Security and Access
Lighting Control
Appliance Control
Remote Diagnostics
Telehealth Monitoring
Street Light control
And more...

ENERGY MANAGEMENT/SMART GRID APPLICATIONS

Automated Meter Reading
Automated Meter Management
Advanced Metering Infrastructure
Utility theft detection
Pay per use metering
Solar Panel control
And more...

IT900 offers a full protocol stack to meet the demands of Energy Management/Smart Grid including (AMR/AMM/AMI) and Home/Building Automation.

IT900 features high in-phase and cross-phase reliability and offers Yitran's next generation Turbo DCSK technology to enable a high level of code efficiency, robustness and transmission speeds of up to 500Kbps.

IT900 is fully interoperable with Yitran's IT800 and IT700, and complies with worldwide regulations (FCC, ARIB, CENELEC). IT900 is available in a DSP (Digital Signal Processing) version with an external AFE and a SoC silicon solution with integrated AFE.

PHY LAYER

• Spread Spectrum DCSK Turbo
• Decision Feedback Equalizer
• Fully compliant with worldwide regulations FCC, Cenelec A&B, ARIB.
• Symbol Correlation with DFE.

MAC LAYER

• Adaptive Optimized CSMA/CA with Transmission Priority and Delay Control Mechanism.
• Transmission Services:
  Internetwork Unicast & Broadcast.
  Intranetwork Unicast & Broadcast.
• Upper Layer Channel and Packet Monitoring
• Optional Security Suite

UPPER LAYER OPTIONS

• Y-Net proprietary upper layer optimal for Automatic and Smart Metering Applications
• ZigBee/SE 1.0
• IP (IPv4 and IPv6)
• SE 2.0 (when available)

PARAMETER	VALUE	NOTE
Modulation	DCSK Turbo	Patented modulation technique
SNR for AWGN	< -7dB	
SNR for CW noise	< -30dB	
Frequency Operation Band	Within 100-400 kHz	FCC/ARIB Bands
	Within 9-95 kHz	CENELEC Band A
	Within 95-125 kHz	CENELEC Band B
Bit Rate	1.25 - 500 kbps	FCC/ARIB Bands
	0.625 - 150 kbps	CENELEC Band A
	0.625 - 75 kbps	CENELEC Band B
Error Correction	Forward short-block soft decoding error correction code and CRC-16	
Receiver Sensitivity	<1mV PTP	
Dynamic Range	>85dB	
Interface*	UART / SPI / I^2C / JTAG / dedicated A/D	Simple command language
Package*	HTQFP 100 pins	
I/Os*	24 general purpose I/Os	
Rx Power Consumption	< 80mW	
Network Size	2000 nodes	

*silicon solution

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YITRAN COMMUNICATIONS
POWERING THE SMART GRID
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