Integrating Bluetooth communication in to your final product has never been easier. The new PAN1455/1555 Bluetooth module series include on-board microcontrollers that optionally include multiple BT profiles, including SPP, HSP, HFP and HDP.

The new PAN1455/1555 Bluetooth module series are based upon Cambridge Silicon Radio's BlueCore6-ROM (BC06). The PAN1555 includes an integrated ceramic antenna while the PAN1455 is excellent for projects requiring an external antenna. These modules are compatible with the Bluetooth Specification - 2.0 + Enhanced Data Rate (EDR) up to 3Mbits/s. The products deliver greater simplicity of use, lower power consumption and enhanced security. PAN1455/1555 Bluetooth module series are 100% footprint compatible with their predecessors the PAN1450/1550, are backward compatible with older Bluetooth devices (back to version 1.1) and do not require qualification.

Product Performance:

- Fully Qualified Bluetooth v2.0 +EDR
- Dimensions:
  - PAN1455 - 18.75mm x 13.5mm x 2.85mm
  - PAN1555 - 22.75mm x 13.5mm x 2.85mm
- Full Product Qualification (Bluetooth, CE, FCC, IC)
- Operating Temperature Range: -40°C to +85°C
- Supply Voltage Range: 2.7V to 3.6V, typ. 3.3V
- Profiles: GAP, SDAP, SPP, HID And HDP Available, Others Can Be Supported On Request
- CSR BlueCore6-ROM Inside
- Cortex-M3 ST32F103 Core For Embedded Profiles Or Application Software
- Fast Connection Setup
- Support For 802.11 Coexistence

Interfaces:

- UART (Programmable Baud Rate), USB, I²C, SPI And ADC
- 18 GPIOs For Individual Usage For Your Embedded Software
- All Bluetooth Data Rate Up To 2178kbps Asymmetric
- PCM Interface Master/Slave supporting 13 or 16 bit linear, 8 bit µ-law Or A-law Codecs And CVSD Transcoders On Up To 3 SCO Channels.
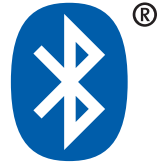
Radio Features:

- High Sensitivity Design (-86 dBm Typ.)
- Full 8 To 128 bit Encryption
- Power Control And RSSI, Hold, Park And Sniffmode
- Support For Very Low Power Modes: Sleep and Deep sleep
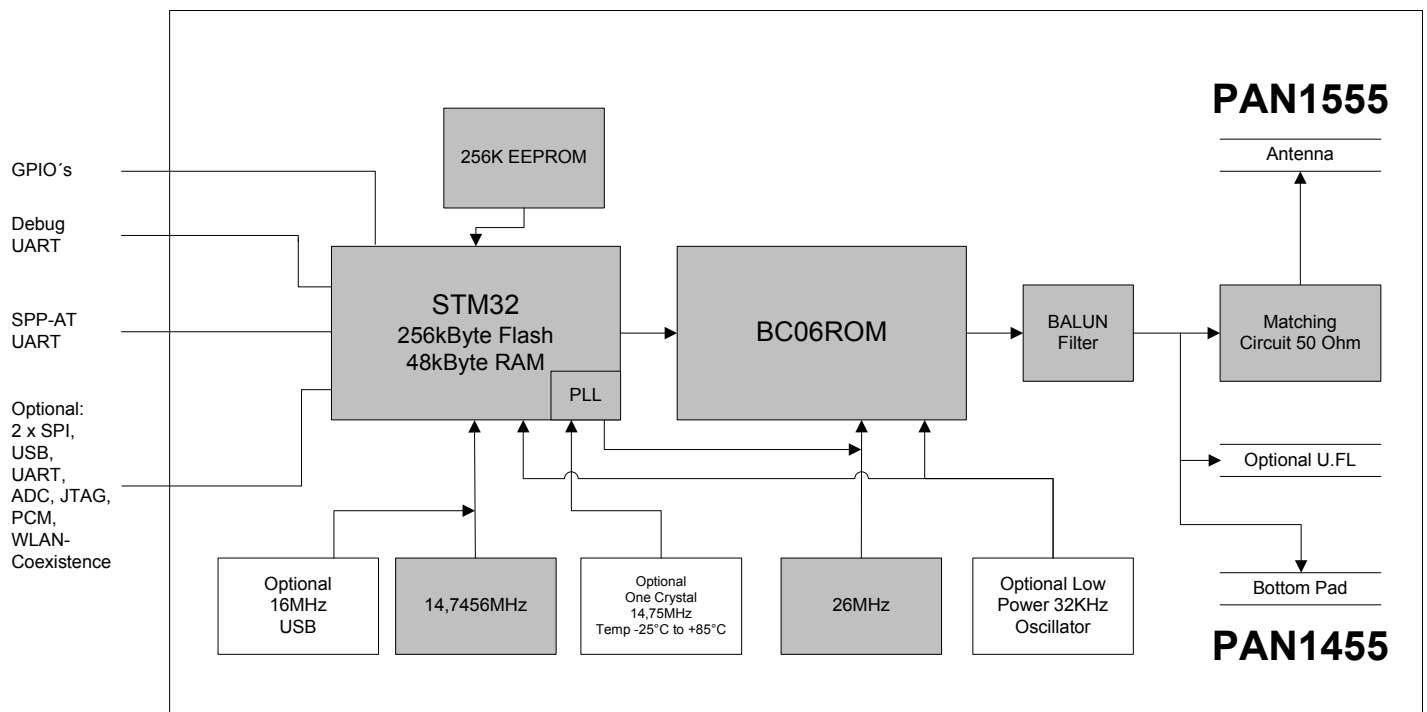
Part Numbers:

Part Number	Description
ENW89815A3KF	PAN1555, CSR, BC06, SPP Profile, Integrated Antenna
EVAL_PAN1555	Evaluation Kit For The PAN1555 Module
ENW89815C3KF	PAN1455, CSR, BC06, SPP Profile, Integrated Antenna
EVAL_PAN1455	Evaluation Kit For The PAN1455 Module

Applications:

- Printers & Printer Adapters
- Access Points
- Wireless Sensors
- Industrial Applications
- Cable Replacement
- Personal Digital Assistants (PDAs)
- Personal Navigation Devices
- Automotive Applications
- Medical Applications

Block Diagram:

Technical Specifications:

Parameter	Value	Condition / Notes
Receiver Sensitivity (BER=10^{-3})	-86 dBm typ.	ideal wanted signal
Output Power	+4 dBm typ.	
Power Supply	2.7 - 3.6 V	Single operation voltage
Ultra Low Power Mode	< 100 μA	T = 25°C
ACL (connected DH5)	50.5 mA to 49.5 mA	max power to min power [*]
ACL (connected DH1)	48.0 mA to 46.0 mA	max power to min power [*]
Operating Temperature Range	-40°C to + 85°C	Storage up to +125°C

[*] Figure indicates to the shortest poll period and to the slave mode