

# ST Microelectronics Metering Products

*Available from Avnet*

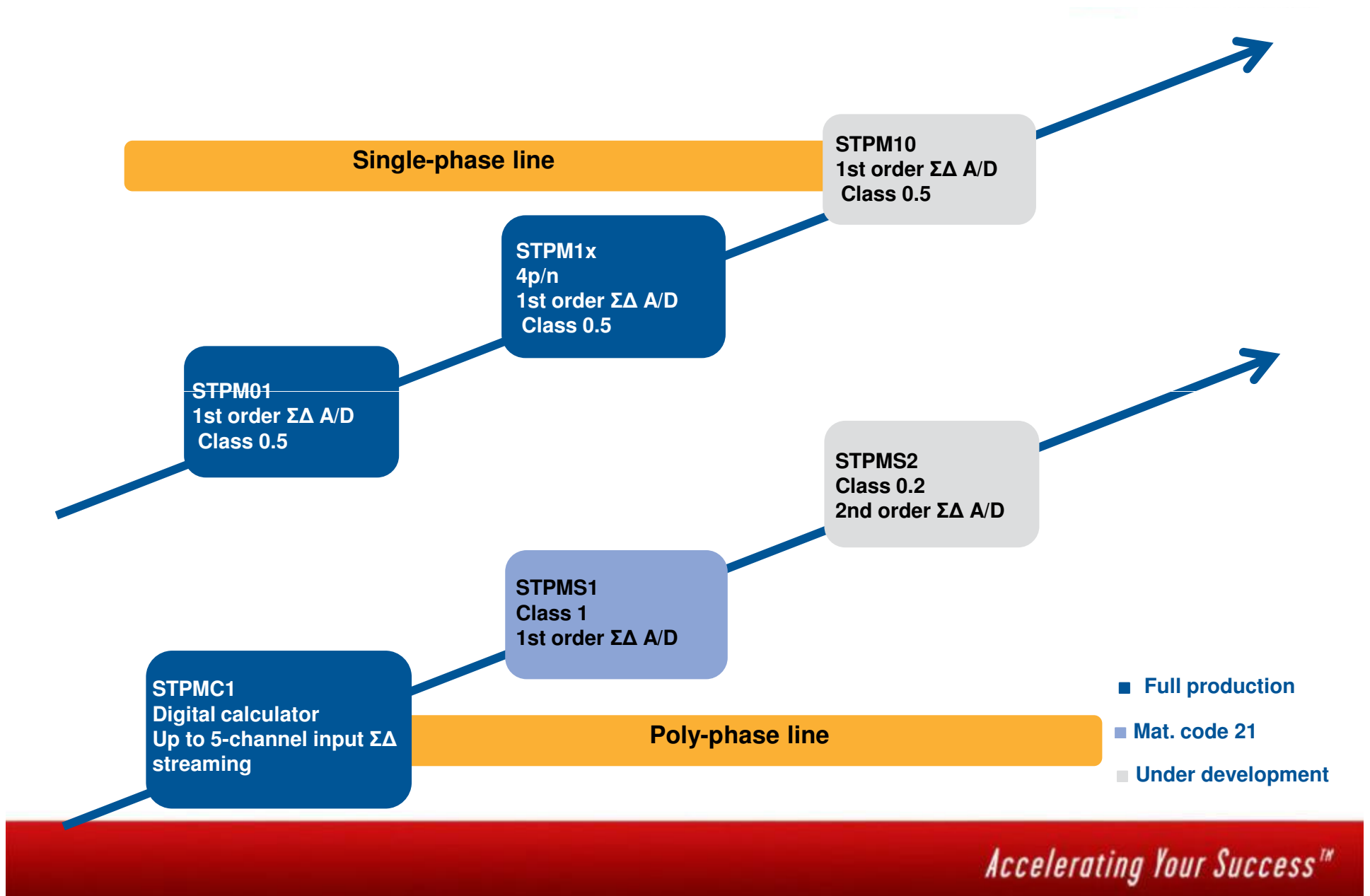


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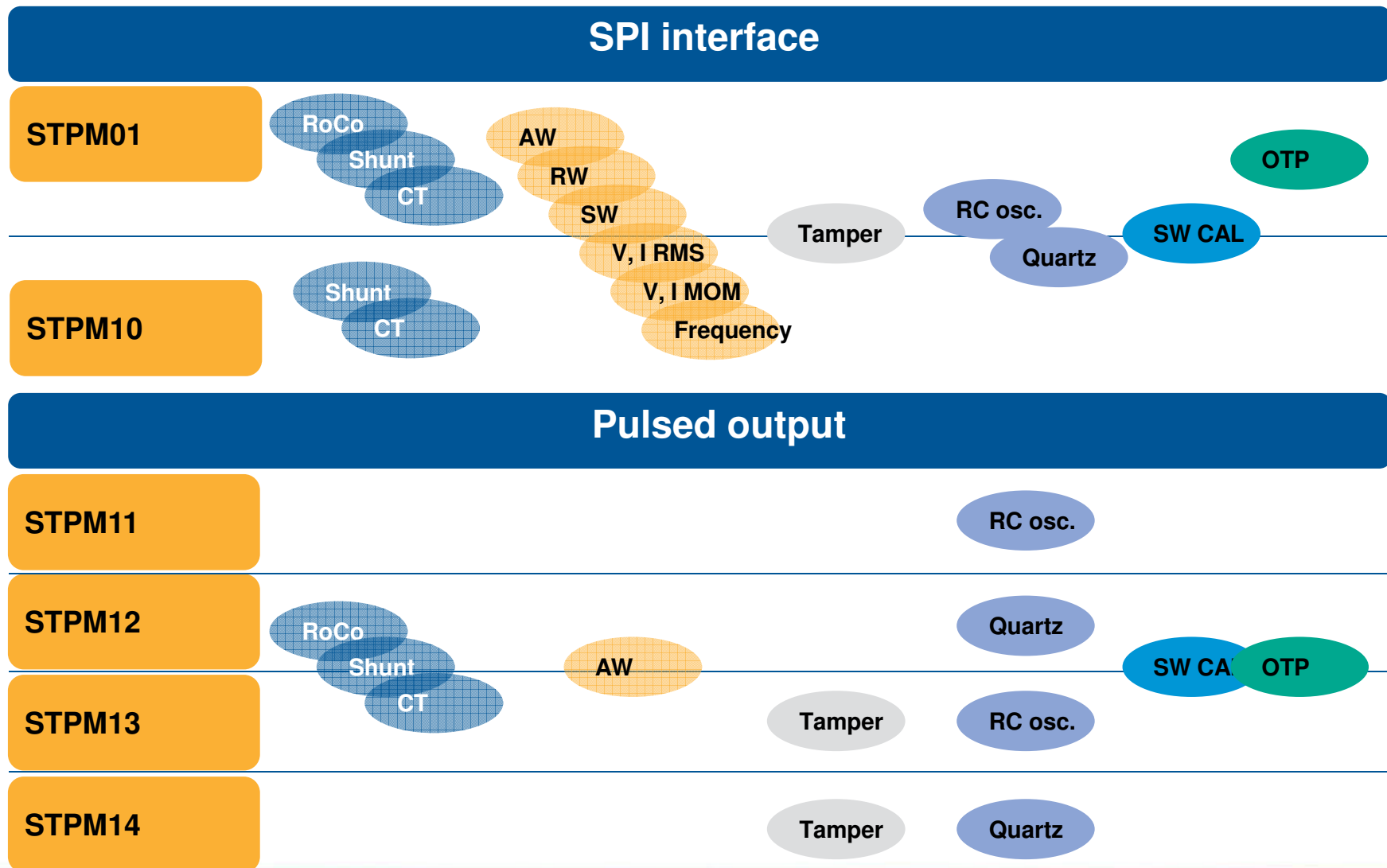
# Metering



# Metering products portfolio



# STPM Power Metering family overview



# Single Phase STPM family features

- **Measurement**
  - Active, reactive, apparent energies, Vrms, Irms, frequency
- **Sensors**
  - Current transformer, shunt
- **Operation**
  - MCU based
- **Accuracy**
  - 0.1% in 1:1000 range
- **Tamper proof**
  - 2 current channels available
- **Support IEC 61036 and ANSI C12.1**
- **Calibration**
  - Very short calibration time
  - No ripple in the active energy
  - Separated for voltage and current
- **Flexibility**
  - From low to high end allows re-use of already tested boards layouts
- **2 current channels**
  - STPM01 manages itself the anti-tamper features itself, even without MCU



# Poly-phase STPM chipset approach

## Modular solution

- Supports 1-, 2- or 3-phase delta and wye services, from 2 to 4 wires

## Measurement accuracy

- Sigma delta converters (STPMS1/2) can be placed very close to the current transducers, minimizing noise capture of analog tracks
- Digital data transferred to a dedicated DSP, STPMC1, through a single-wire data line

## Features

- 112-bit configurators for greater flexibility
- Supports Rogowski coil, current transformer, shunt and Hall current sensors
- Up to 9  $\Delta\Sigma$  streamings from STPMS1/2 companion chip
- Ripple-free cumulative active-energy pulsed output
- Stepper motor outputs
- SPI for configuration, calibration and microcontroller interface
- Neutral current, temperature, magnetic field monitoring
- OTP memory for digital calibration and configuration

**IEC 62052-11/62053-21/62053-22/ 62053-23**  
**ANSI C12.1-2001/C12.10-1997/ C12.20-2002**  
**standards compliant**

# 3-phase 4-wire with tamper

